

Abstract of the Disclosure

**[0098]** An echo canceler includes an recursive least squares lattice to whiten a far-end signal  $s_1(t)$  and provide whitened time delays. The echo canceler further decorrelates a microphone signal based on the whitened time delays to reduce echoes of the far-end signal  $s_1(t)$  that are contained in the microphone signal  $x_2(t)$ . The echo canceler does not use a double-talk detector and avoids all problems inherent with their use. Thus, speaker phones, and other communication devices, can continuously operate in full-duplex mode of operation thereby providing natural conversational hands-free communication.